

Sound Environmental Solutions

PEOFINED

2010 NOV -3 FM II: 25

AIR POLLUTION
CONTROL PGM

November 3, 2010

Mr. Kendall Hale, Chief
Construction Permits Unit
Air Pollution Control Program
Missouri Department of Natural Resources
1659 E. Elm St.
Jefferson City, MO 65101

Re:

Construction Permit Application

Heartland Materials, LLC, Heartland Quarry

2009 E. McCarty St. Jefferson City, MO 65101

> voice: 573.636.9454 fax: 573.761.4200

Dear Mr. Hale:

1350 E. Kingsley St. Suite E Springfield, MO 65804

voice: 417.886.9200

fax: 417.886.9876

209 E. Green Meadows Rd. Suite H

> Columbia, MO 65203 voice: 573.443.4102

> > fax: 573.443.4105

On behalf of Heartland Materials, LLC, (Heartland), LLC, Midwest Environmental Consultants (MEC) submits the enclosed application to construct and \$100 filing fee for a new stationary crushing facility. The proposed facility will be located off County Road 601, Jackson, Missouri within a 161-acre tract of land located at SUR 799/2192, Township 32 N, Range 13 E, Cape Girardeau County, Missouri. The application, which contains an Application to Construct Form, Form 1.1, Form 1.2, Form 1.3 and a site map, is included in Attachment A.

Heartland has identified the primary crusher as the "core" component of this operation. In lieu of the equipment maximum hourly design rates to determine potential emissions and compliance with the National Ambient Air Quality Standards (NAAQS), Heartland requests the review be based on generic process limitations. Heartland accepts a reduced NAAQS compliance threshold for total process emissions of 130 micrograms per cubic meter ($\mu g/m^3$) and the use of Best Management Practices (BMPs) for fugitive dust control for haul roads and vehicular activity areas of the stock piles. Heartland requests a voluntary emissions limit of 15 tons per year for particulate matter less than 10 microns (PM₁₀) per year. A CD containing an electronic copy of the quarry spread sheet is also enclosed.

www.mecpc.com

The generic equipment listed in the quarry spread sheet is a reflection of the planned development of the facility.

According to Heartland the local utility indicated it will take 5 to 6-months to provide line power to the facility. Interim power will be supplied by a 1,000 horse power (estimated) portable generator set. The portable generator set will be at the facility less than 12-months and will be removed once line power is supplied to the facility. The generator set has not been included in the spread sheet because it is considered to be transportable and is transported from location to location.

Heartland requests solitary and same owner/different owner concurrent operations at this facility.

If you have any questions, please call me at (573) 636-9454 or e-mail me at dsmart@mecpc.com.

Sincerely,

MIDWEST ENVIRONMENTAL CONSULTANTS

Dean S. Smart Project Manager

ATTACHMENT A

permued

2010 KOY -3 MY 11: 25

AIR POLLUTION

Missouri Department of Natural Resources OL FOM

Air Pollution Control Program

APPLICATION FOR AUTUO



APCP	USE ONLY
Check No.: 100 3	Check Recd: 11-3-12
Check Amount: \$ 100 —	Check Date: 10-22-10

APPLICATION FOR AUTHORITY TO C	CONSTRUCT		\$ 100-	10.00 10
			Project Number:	
All Applications Must be Accompanied by a \$100 Filing Fee, Ex-	cept for Those App	vina for Permi		-
Processing Fees at the Rate currently charged by the APCP will				nit is required).
Installation Name:				
1.) Heartland Materials, LLC				
Installation Street Address:			**	
2.) County Road 601				
Installation Mailing Address:		***************************************		
3.) See Parent Company Address				
Installation City:			State:	ZIP CODE:
4.) Jackson			МО	63755
County: Cape	,	SUR 799	,,,,	
5.) Girardeau 6.) 1/4, of 1/4, of	Section:	SUR 2192	Township: 32N	Range: 13E
Final Product/Principle Activity	COOSIGN,	001(2102	SIC Code	rungo. , o L
That I food out thought restrict			0.0 0000	
7.) Limestone Quarry			8.)	1422
7.) Limestone Quarry Parent Company:			[0.]	7,122
			,	
9.) Heartland Materials LLC Parent Company Mailing Address:				
·				
10.) P.O. Box 558			161-1-	Tain cone.
Parent Company City:			State:	ZIP CODE:
11.) Benton			MO	6373
Contact Person:		Contact Pers		
12.) Danny Dumey			Member	
Contact Person's Mailing Address:				
13.) P.O. Box 558				
Contact Person's City:			State:	ZIP CODE:
14.) Benton			MO_	6373
Contact Person's Telephone Number:		Contact Pers	on's Fax Number:	
15.) 573-545-3030		16.)	573-545-3830	
Contact Person's Email Address:				
17.)				
Unified Review				
18.) <u> </u>				
This Application is for:				
Modification or Addition to an Existin	g Installation		New Installation	X
19.) Amendment to Existing Permit: Perm	nit No		Temporary/Pilot	Plant 🗆
FIPS County ID Number:	Plant ID Num	ber:		
457 031				
20.) D55 11/3/16	21.)			
Projected Date to Commence Construction:	Projected Da	te of Operation	n Startup:	
1/1/2011		After the first	of 2011	
22.)	23.)			
APPLICANT'S CERTIFICATION STATEMENT:	***************************************			
certify that I have personally examined and am familiar with the	information in this a	application and	d believe that the infor	mation submitted is
accurate and complete. I am aware that making a false statemen	nt or misrepresenta	tion in this app	olication is grounds for	denying or revoking the
construction permit. I may also be guilty of a misdemeanor and u	ipon conviction, ma	y be punished	by fine or imprisonme	ent.
Signature of Responsible Official:			Date:	
24.) Daning Denny 1.			25.) ().+ 23	Jacob
Type or Print Name of Responsible Official:			Responsible Official's	
26.) Danny Dumey			27.) 573-54	5-3030
Official Title of Responsible Official:				
(8.) Member				

Project D	Description and Narrative [use attached sheets if necessary]:
29.)	Heartland Materials would like to construct a rock crushing facility. The facility will consist of
	primary, secondary, tertiary and fine crushers, screens, conveyors and storage bins. The blast rock
	will be loaded in the grizzly/feeder by truck to feed the primary crusher. The primary crusher
	will be located in the quarry pit and crushed rock from the primary will be conveyed to the remainder
	of the plant for further crushing, screen and stock piling.
	er the plant for facilities order and electric plants.
	
•	

Emission Information for Air Construction Permit Application Form 1.1 Process Flow Diagram for Facility According to Proposed Application

Installation Name:	FIPS County No.	Plant No.					
(a.) Heartland Materials, LLC	(b.) 031	(c.)					
For a new installation, show the entire installation.	For an addition to an existing in	stallation, show only the					
new processess/equipment/emission points and be	gin the ID numbering where the	e existing EIQ emission					
point numbers leave off. If the application is for a modification or an addition to an existing emission point or							
unit, show the upstream downstream point(s) or equipment that this modification will affect.							
		į					
No Flow D	iagram - Generic Permit						
, NOTION D	agram - Generic Fermit						

Emission Information for Air Construction Permit Application Form 1.2 Summary of Emission Points Affected by this Application (duplicate this form as needed.)

Form 1.2 Summary of Emission	Points Affected by this /		
Installation Name:		FIPS County No.	Plant No.
(a.) Heartland Materials,	LLC	(b.) 031	(c.)
Point No.	Point Description		Reference Worksheet(s) Form
(i.e. EP-01, EP-02, etc.):	(use same description	on Form 2.0)	Numbers Used with Form 2.0
(d.)	(e.)		(f.)
See quarry workbook spread			
sheet.			
EP 0-1	drilling		
EP 0-2	blasting		
EP1	loading fragmented st	one	
EP2	haul road 1		
EP3	unloading fragmented	stone	
EP4	grizzly feeder		
EP5	primary crusher core u		
EP6	generic crushing (2 ad		
EP7	generic fine crushing (
EP8	generic screens (4 eac		
EP9	generic conveyors (50		
EP10	generic storage bins (
EP11	stock pile wind erosior		
EP11	stock pile vehicle activ	ity	
EP11	stock pile load out		
EP12	haul road 2		
EP13	generic pug mill		
10.			
	***************************************	***************************************	

Emission Information for Air Construction Permit Application

Form 1.3 Plant Layout Diagram

	tion Name:	FIPS County No.	Plant No.	
(a.)	Heartland Materials, LLC	(b.) 031	(c.)	
	Please use this page	or a separate sheet to provide a Plan he Permits Instruction Packet for o	nt Layout Diagram.	
	Refer to t	ne Permits instruction Packet for C	ietans.	
	See Attache	ed Drawing		
		·		

v8/24/2007	Installation Information
ID No.:	
Name:	
Proj. No.:	

	Portable Site Location Information (if applicable)
Site ID No.:	
Site Name:	Heartland Materials, LLC, Heartland Quarry
Site Address:	CR 601, Jackson, Missouri
County, CSTR	Cape Girardeau, SUR799/2192, T32N, R13E

Primary U	nit Size (tph):	1,000.00	
Nearest Proper	ty Line (feet):	600	
Storage Pile Information	Defaults	Pile #1	Pile #2 Pile #3
Storage Pile ID No.:	None	SPI	
Maximum Area of Storage Pile (Acres):	None	20	
Method of Load In to Storage Pile:	Truck	conveyor	
Method of Load Out from Storage Pile:	Loader	Loader	
Proposed Vehicular Activity Control:	None	BMPs	
Unloaded Loader Weight(tons):	None	32.00	
Average Loaded Loader Weight(tons):	None	44.00	
Average Distance Loader Travels(feet):	50	50	

P	ower Source:	Engine/Generator	
Warn	n-up/Shut-do	wn Time (hours):	
Fuel	Combustion E	quipment Calculation	ons
Size of Con	bustion Unit (Enter Value for One	Below):
Horsepower:	0.0	MMBTU/Hr:	
Type of Fuel (Click	for Pulldown):	Diesel	
HP Heat Input to Ou	tput Efficiency	MHDR	Fuel Units:
35		0.00000	1,000 Gallons

Haul Road/Truck/Material Information	Defaults	Pit	Plant	Plant	Plant	Plant	Plant
Haul Road ID No.:	None	HR I	HR 2				
Length of Haul Road (Feet):	None	600	1600				
Unloaded Truck Weight (Tons):	None	25	10				
Average Loaded Truck Weight (Tons):	-None	60	25				
Haul Road Control Information	Defaults	Road #1	Road #2	Road #3	Road #4	Road #5	Road #6
	917 7/19/5/2015	ALC: NAME	Click on Cell	Below for Pull D	own Menu and to	Highlight Select	ion
Proposed Haul Road Control (if applicable):	None	BMPs	BMPs	T			
Typical Control Efficiency Allowed (%):	0.00	90.0%	90.0%				

·····································	Height(feet)	Diameter(feet)	Flow Rate	Exit Temperatu
Stack Parameters for Diesel Engines				
	Height(feet)	Diameter(feet)	Capacity	Throughput
Fuel Tank Parameters				

Enter
Emission Unit
Information
Below



v8/24/2007 Installation Information		Portable Site Location Information (if applicable)	
ID No.:		Site ID No.:	
Name:		Site Name: Heartland Materials, LLC, Heartland Quarry	

			Max Hourly			
		Equipment/SCC Description	Design Rate	MHDR	Control Type	"000"
Unit ID	Description of Unit	Click on Cell Below for Pull Down Menu and to Highlight Selection	(MHDR)	Units	Click on Cell Below for Pull Down Menu	Applicable
EP 0-1	drilling	Drilling, Wet - Controlled (Not included in Calculations)	1000.0000	Tons		
EP 0-2	blasting	Blasting. (Not Included in Calculations)	1000,0000	Tons/Day		
EP1	loading fragmented stone	Truck Loading - Fragmented Stone, Uncontrolled EF	1000,0000	Tons		
EP2	haul road I	Haul Road #1	6.4935	VMT	BMPs	
EP3	unloading fragmented stone	Truck Unloading - Fragmented Stone, Uncontrolled EF	1000.0000	Tons		
EP4	grizzly feeder	Grizzly Feeder	1000.0000	Tons		
EP5	primary crusher core unit (1)	Crusher-Primary, (Diameter 3-12")	1000.0000	Tons	Wet Spray Devices	Ì
EP6	generic crushing (2 additional)	Crusher-Secondary. (Diameter 1-4")	1000.0000	Tons	Wet Spray Devices	
EP7	generic fine crushing (3 at 50 tph each)	Crusher-Fines, (< 3/16")	150,0000	Tons		
EP8	generic screens (4 each) 8 x 20 triple deck	Screens, (3/16" or Greater)	2000.0000	Tons	Wet Spray Devices-Carryover	
EP9	generic conveyors (50 each)	Conveyor	20000,0000	Tons	Wet Spray Devices	
EP10	generic storage bins (5 each)	Storage Bin	1500.0000	Tons	Wet Spray Devices-Carryover	
EPH	stock pile wind erosion	Wind Erosion. Storage Pile #1	20.0000	Acres		
EP11	stock pile vehicle activity	Vehicular Activity. Storage Pile #1	1000.0000	Tons	BMPs	
EPH	stock pile load out	Load Out, Storage Pile #1	1000.0000	Tons		
EP12	haul road 2	Haul Road #2	40.4040	VMT	BMPs	
EP13	generic pug milt	Storage Bin	300.0000	Tons	Moisture Content, => 1.5%	
and the second						

	Installation Information		Project No.			Hours of	Operation per 2	4 Hour Period:	12.7500	
ID No.:						Distan	ce to Nearest Pro	perty Line (ft):	600.00	
Name:						Pri	nary Unit Size (1	ons per Hour):	1,000.00	
	Portable Site Location Information (if applicable)									
Site ID No.:						Daily P	M10 Ambient In	ipact - (ug/m3):	129.86	Desired
Site Name:			Ī	Composite Daily Ambient Impact Factor (ug/m3-ton):		0.0102	Production			
Site Address:						Daily Produc	tion Limitation -	- (tons per day):	12,750,00	
	Hours of Operation - Ambient Impacts (ug/m3)				Estimated Annual Production - Daily Limit Basis (tpy):			4,653,750		
	Generic Equipment:					Hourly PM10 Er	nissions (lb/hr):	29.95		
	Conveyor/Bin/Stacker Drop Point: 24.4902				Composite PM10 Emission Factor (lbs of PM10 per ton):				0,0300	
	Haul Roads:	0.0000			Condi	tioned Annual	PM10 - Daily Li	imit Basis (tpy):	73.35	
	Storage Pile - Loading/Vehicle Activity:	0.0000			Production Limitation - 15 Tons of PM10 (tpy):			1,001,642		
	Storage Pile - Wind Erosion (24 Hours): 0.0000				Unconditioned Annual PM10 Emissions				131.18	Ambient
	Combustion:	21.1035				% of Rock	Controlled PM10		Nomograph	Impact
				MHDR & EF	Control	through	Emission	ns for Unit	Value for Unit	for Unit
Unit ID	Description of Unit	MHDR	PM10-EF	Units	Efficiency %	Unit	(lb/hr)	(lb/ton)	(ug/m3)	(ug/m3)
EP 0-1	drilling	1000.0000	0.000000	Tons		100.00	0.0000	0.000000	0.00	0.000
EP 0-2	blasting	1000.0000	0.000000	Tons/Day		100.00	0.0000	0.000000	0.00	0.000
EPI	loading fragmented stone	1000.0000	0.000016	Tons		100.00	0.0160	0.000016	24.49	0.392
EP2	haul road I	6.4935	2.527839	VMT	90.00	100.00	1.6415	0.001641	0.00	0.000
EP3	unloading fragmented stone	1000.0000	0.000016	Tons		100.00	0.0160	0.000016	24.49	0.392
EP4	grizzly feeder	1000,0000	0.000016	Tons		100.00	0.0160	0.000016	24.49	0.392
EP5	primary crusher core unit (1)	1000.0000	0.002400	Tons	75.00	100.00	0.6000	0.000600	21.10	12.662
EP6	generic crushing (2 additional)	1000,0000	0.002400	Tons	75.00	00.001	0.6000	0.000600	21,10	12.662
EP7	generic fine crushing (3 at 50 tph each)	150.0000	0.015000	Tons		100.00	2.2500	0.002250	21.10	47.483
EP8	generic screens (4 each) 8 x 20 triple deck	2000.0000	0.008700	Tons	91.50	100.00	1.4790	0.001479	21.10	31.212
EP9	generic conveyors (50 each)	20000.0000	0.001100	Tons	95.80	100.00	0.9240	0.000924	24.49	22.629
EP10	generic storage bins (5 each)	1500.0000	0.001100	Tons	95.80	100.00	0.0693	0.000069	24.49	1.697
EP11	stock pile wind erosion	20,0000	0.089166	Acres		100.00	1.7833	0.001783	0.00	0.000
EP11	stock pile vehicle activity	1000.0000	0.004486	Tons	90.00	100.00	0.4486	0.000449	0.00	0.000
EPII	stock pile load out	1000,0000	0.011991	Tons		100.00	11.9912	0.011991	0.00	0.000
EP12	haul road 2	40,4040	2.005262	VMT	90.00	100.00	8.1021	0.008102	0.00	0.000
EP13	generic pug mill	300,0000	0.001100	Tons	95.80	100.00	0.0139	0.000014	24.49	0.339
	generic pug mill	300,0000	0.001100	Tons	95.80	100.00	0.0139	0.000014	24.49	

SITE DRAWING

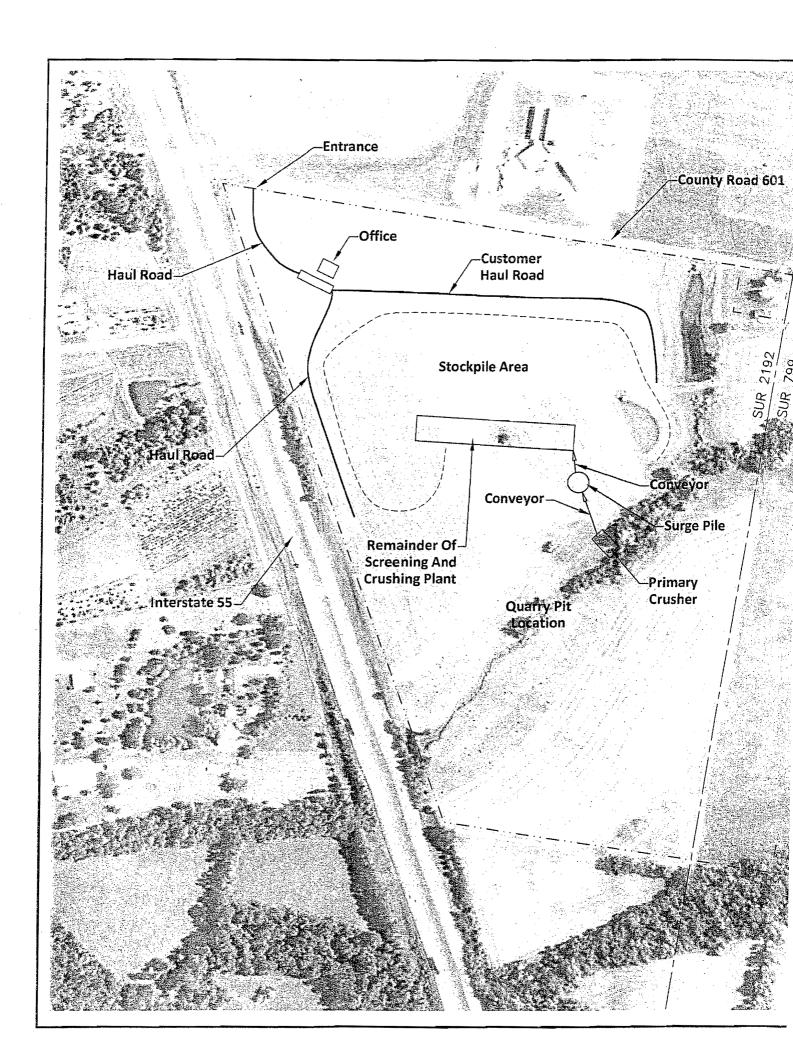




FIGURE 1

October 2010



Heartland Materials, LLC

Corp Jurisdictional Determination Air Construction Permit Application Site Map